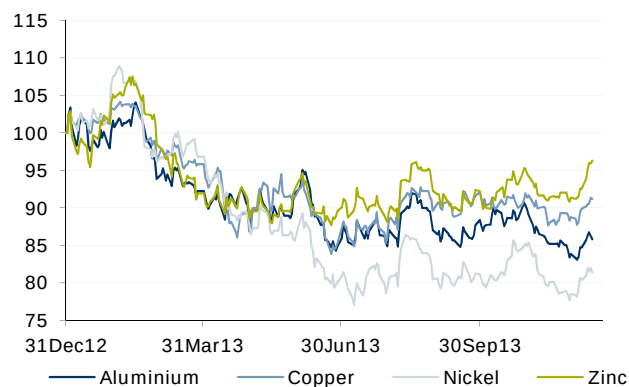


Metals Weekly Chartpack

Commodities Research
commodities_research@nordea.com

Chart 1: LME Cash price history (YTD, indexed)



Source: Bloomberg

Table 1: Metal spot prices

Date: 13/12/2013

LME metals	USD/t	1w chg	1w % chg	YTD chg	YTD % chg
Aluminium	1,751	22	1.3%	-290	-14.2%
Copper	7,219	106	1.5%	-697	-8.8%
Nickel	13,905	165	1.2%	-3180	-18.6%
Zinc	1,959	77	4.1%	-76	-3.7%
Lead	2,116	49	2.3%	-225	-9.6%
Tin	22,725	-300	-1.3%	-775	-3.3%
Steel Billet	260	5	2.0%	-20	-7.1%
Precious	USD/t. oz.	1w chg	1w % chg	YTD chg	YTD % chg
Gold	1,238.80	9.75	0.8%	-436.55	-26.1%
Silver	19.71	0.20	1.0%	-10.64	-35.1%

Source: Bloomberg

Table 2: Metals and related commodities

Date: 13/12/2013

Nordea Forecasts

Industrial metals	Unit	Exchange	Cash	w/w chg	3M futures	w/w chg	2014E	2015E
Aluminium	USD/t	LME	1,751	1.3%	1,796	1.3%	2,200	2,350
Copper	USD/t	LME	7,219	1.5%	7,219	1.5%	7,500	7,500
Nickel	USD/t	LME	13,905	1.2%	13,960	0.9%	16,000	16,000
Zinc	USD/t	LME	1,959	4.1%	1,965	3.3%	2,200	2,400
Lead	USD/t	LME	2,116	2.3%	2,137	2.2%		
Tin	USD/t	LME	22,725	-1.3%	22,655	-1.4%		
Molybdenum	USD/t	LME	26,600	1.3%	26,700	2.7%		
Cobalt	USD/t	LME	21,800	2.3%	21,300	2.4%		
Steel Billet	USD/t	LME	260	2.0%	270	1.9%		
LME Index	USD/t	LME	3,129	2.0%				
Precious metals	Unit	Exchange	Spot	w/w chg	1st future	w/w chg		
Gold	USD/t. oz.	Comex	1,238.80	0.8%	1,234.60	0.5%		
Silver	USD/t. oz.	Comex	19.71	1.0%	19.60	0.4%		
Platinum	USD/t. oz.	NYMEX	1,364.50	0.4%	1,362.90	0.5%		
Palladium	USD/t. oz.	NYMEX	715.80	-2.6%	716.20	-2.7%		
Related commodities/indices	Unit	Index provider	Spot	w/w chg				
N.Europe Hot Rolled Coil (Ex works)	EUR/t	TSI	449.00	-1.5%				
Iron Ore 62% Fe Fines (CFR Tianjin port)	USD/t	TSI	136.00	-2.3%				
Thermal coal, CIF ARA (API2)	USD/t	McCloskey	83.20					
Baltic Dry Index	index	Baltic Exchange	2,330.00	7.1%				
Dollar index	index	Bloomberg	80.21	-0.1%				

Source: Bloomberg

Commodities Research - Analysts

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Markets



Key Market Data

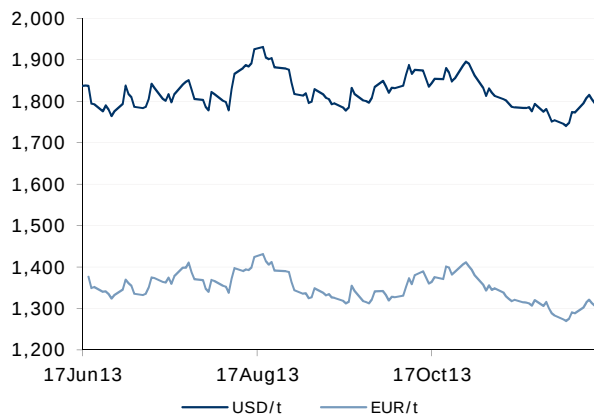
Table 3: Exchange inventories and cancelled warrants			Date: 12/12/2013	Date: 12/12/2013		
LME Metals	Inv. (tonnes)	w/w chg	Cancelled warrants	% of total	w/w chg	
Aluminium	5,606,788	-1.0%				
London Metal Exchange	5,412,100	-0.9%	2,325,125	43.0%	3.7%	
Shanghai Futures Exchange	194,688	-2.5%				
Copper	556,415	-2.6%				
London Metal Exchange	396,075	-3.7%	264,250	66.7%	0.8%	
Shanghai Futures Exchange	143,153	1.1%				
Comex	17,187	-5.2%				
Zinc	1,151,782	-1.9%				
LME	923,125	-2.5%	501,125	54.3%	-4.4%	
Shanghai	228,657	0.3%				
Nickel	255,024	0.9%	108,126	42.4%	6.1%	
Lead	223,250	-2.5%	40,900	18.3%	-12.1%	
Tin	10,345	-2.1%	2,735	26.4%	15.4%	

Source: Bloomberg



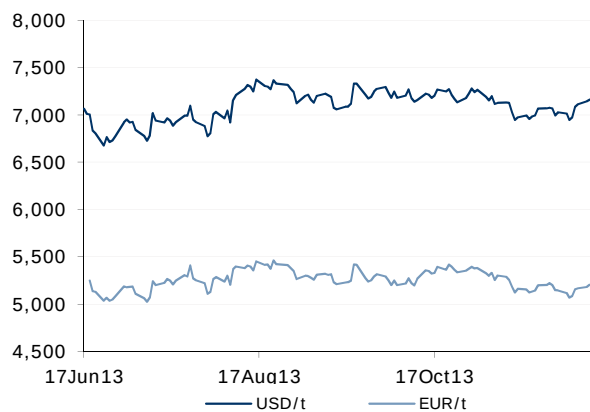
LME futures price history

Chart 3: Aluminium, LME 3m futures



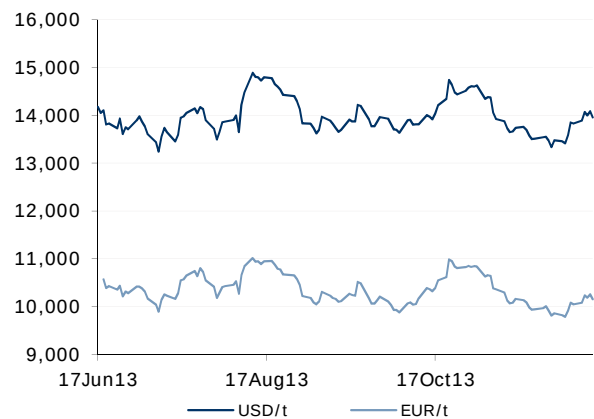
Source: Bloomberg

Chart 4: Copper, LME 3m futures



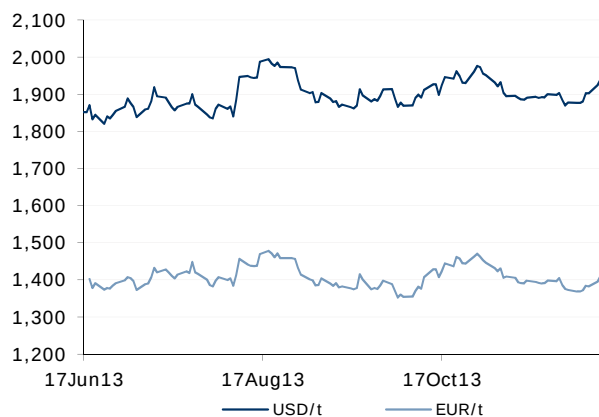
Source: Bloomberg

Chart 5: Nickel, LME 3m futures



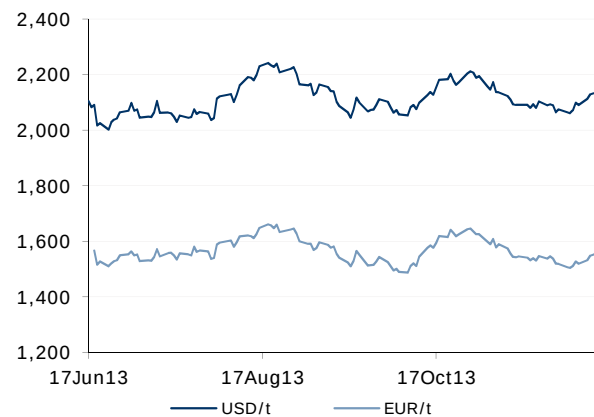
Source: Bloomberg

Chart 6: Zinc, LME 3m futures



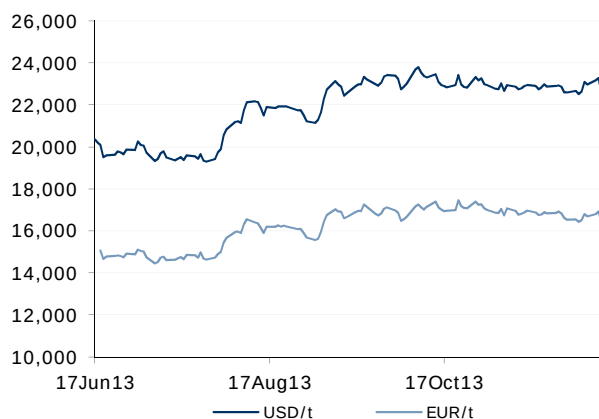
Source: Bloomberg

Chart 7: Lead, LME 3m futures



Source: Bloomberg

Chart 8: Tin, LME 3m futures



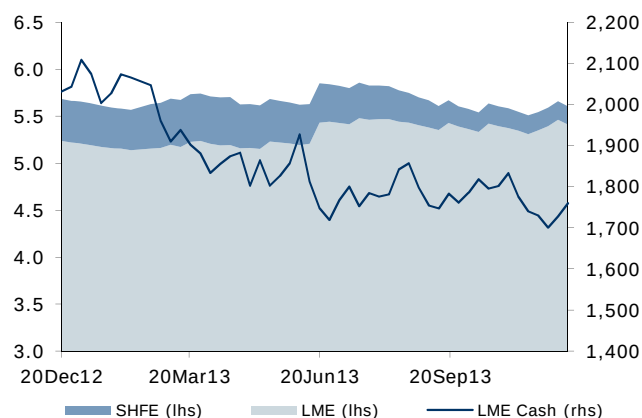
Source: Bloomberg

Markets



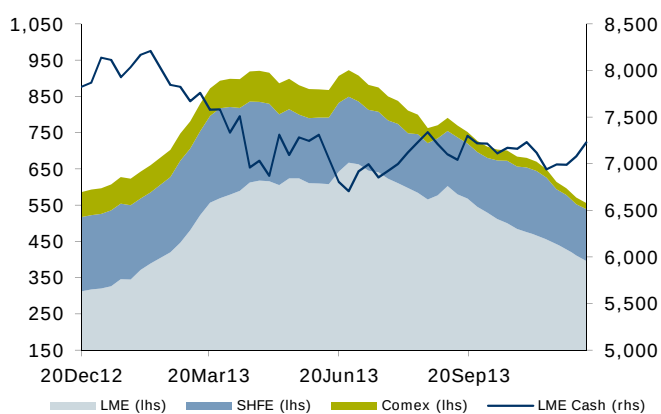
Exchange inventories and LME cash prices

Chart 9: Aluminium, inventories (mt) and LME Cash price (USD/t)



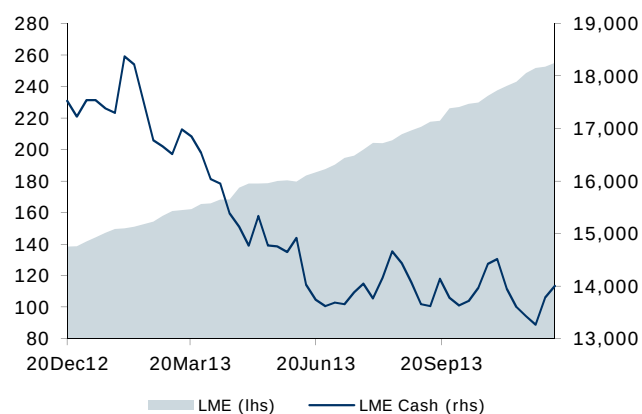
Source: Bloomberg

Chart 10: Copper, inventories (kt) and LME Cash price (USD/t)



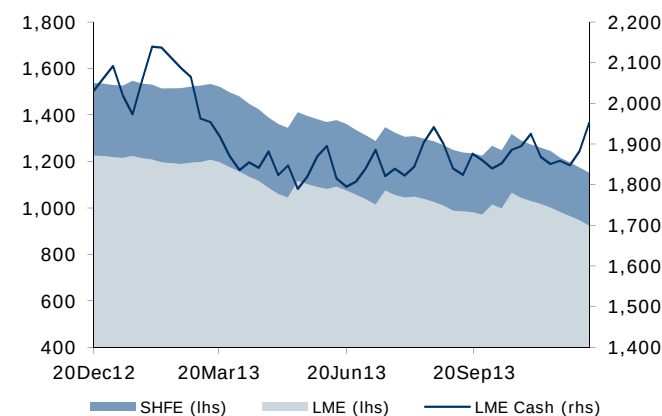
Source: Bloomberg

Chart 11: Nickel, inventories (kt) and LME Cash price (USD/t)



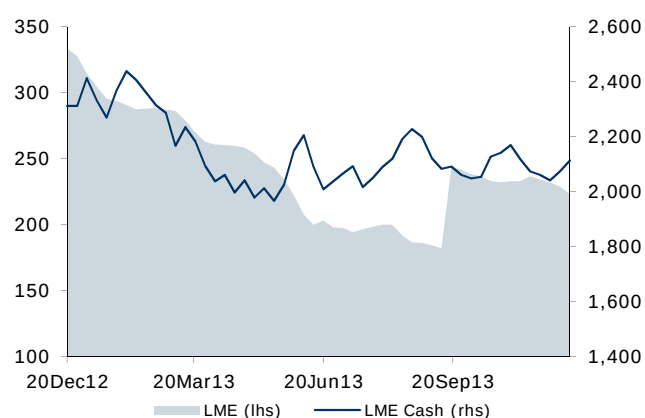
Source: Bloomberg

Chart 12: Zinc, inventories (kt) and LME Cash price (USD/t)



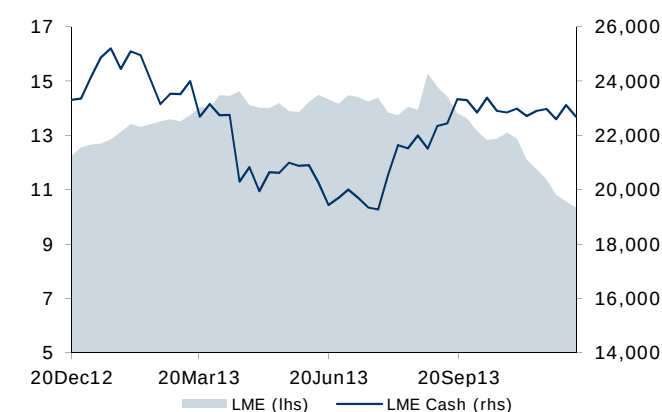
Source: Bloomberg

Chart 13: Lead, inventories (kt) and LME Cash price (USD/t)



Source: Bloomberg

Chart 14: Tin, inventories (kt) and LME Cash price (USD/t)



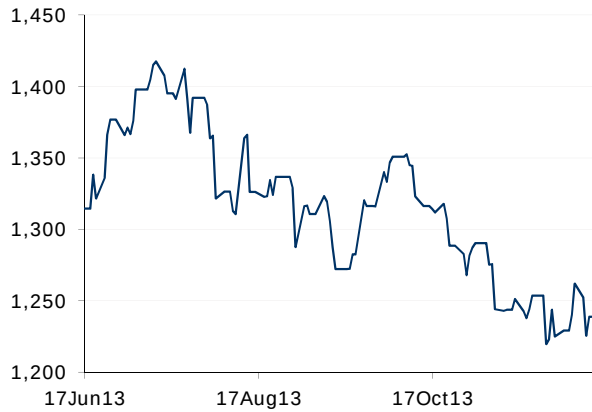
Source: Bloomberg

Markets



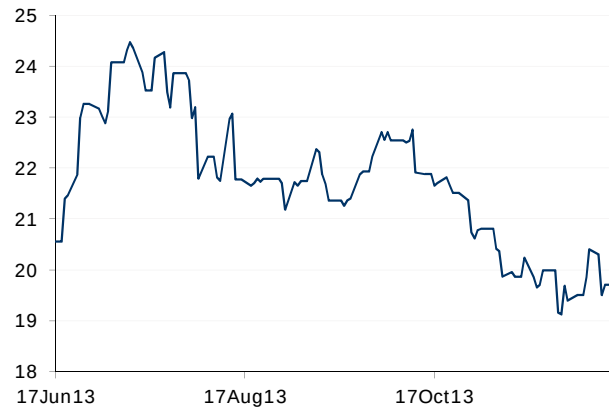
Precious metals, spot price history

Chart 15: Gold spot (USD/t oz.)



Source: Bloomberg

Chart 16: Silver spot (USD/t oz.)



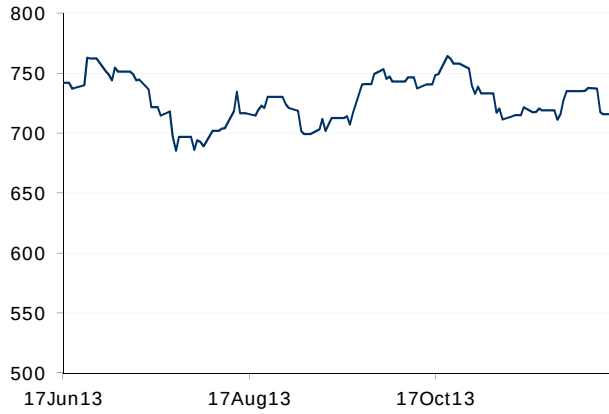
Source: Bloomberg

Chart 17: Platinum spot (USD/t oz.)



Source: Bloomberg

Chart 18: Palladium spot (USD/t oz.)



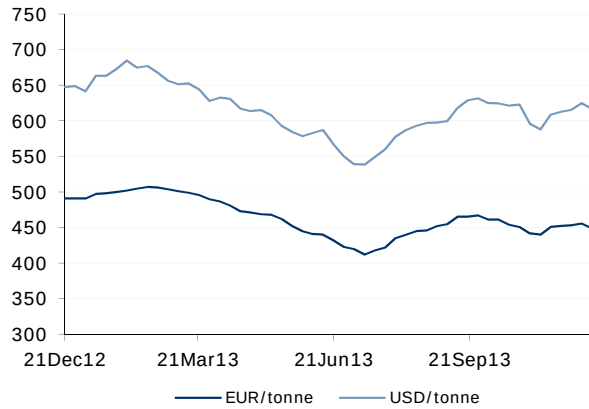
Source: Bloomberg

Markets

Nordea

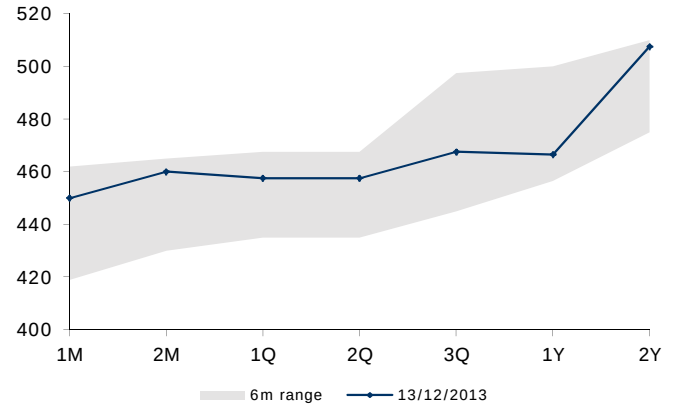
Steel products

Chart 19: N. Europe flat steel prices, HRC North-West Europe (Ex W)



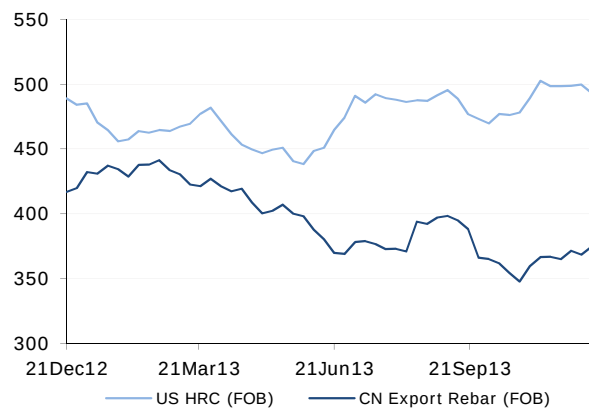
Source: Bloomberg, TSI

Chart 20: Forward curve, HRC North-West Europe (Ex W) (EUR/t)



Source: Bloomberg, FIS

Chart 21: Regional steel benchmarks (EUR/t)



Source: Bloomberg, TSI

Chart 22: This chart is left blank intentionally

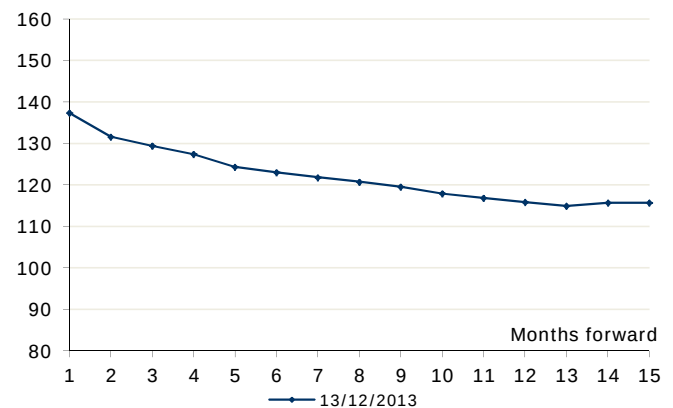
Source: Bloomberg, TSI

Chart 23: Iron ore, China import CFR Tianjin port (USD/t)



Source: Bloomberg, TSI

Chart 24: Forward curve Iron ore, China import CFR Tianjin port (USD/t)



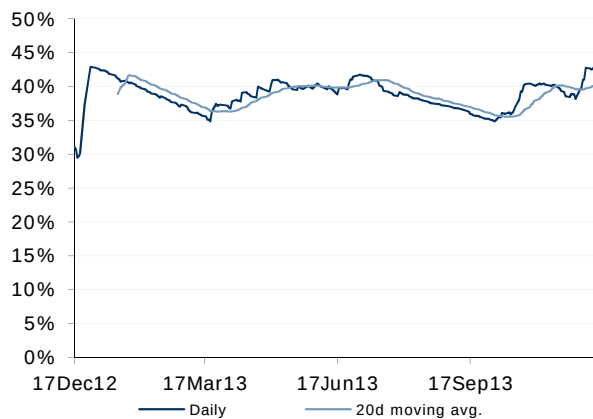
Source: Bloomberg, NYMEX

Markets



Cancelled warrants, percent of LME inventories

Chart 25: Aluminium



Source: Bloomberg

Chart 26: Copper



Source: Bloomberg

Chart 27: Nickel



Source: Bloomberg

Chart 28: Zinc



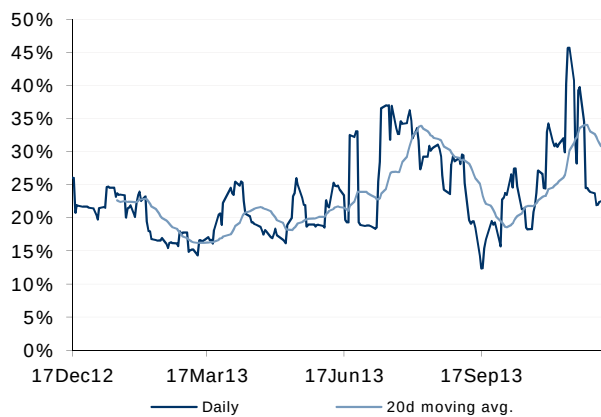
Source: Bloomberg

Chart 29: Lead



Source: Bloomberg

Chart 30: Tin

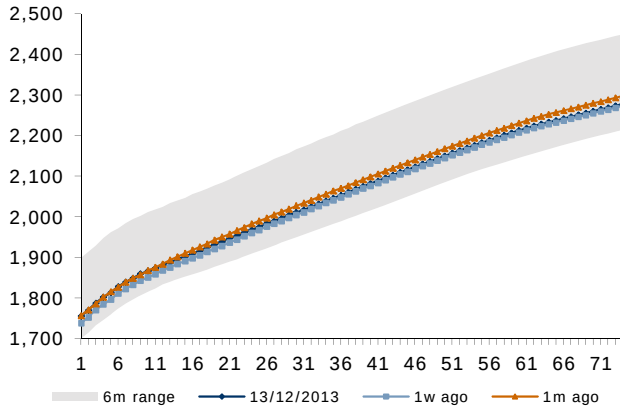


Source: Bloomberg

Markets

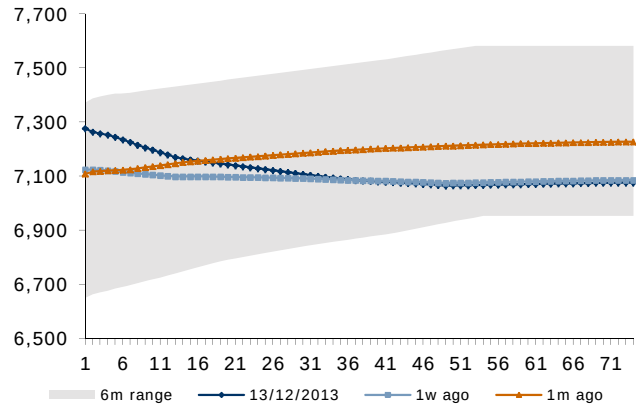
Forward curves, base metals

Chart 31: Aluminium, LME (USD/t)



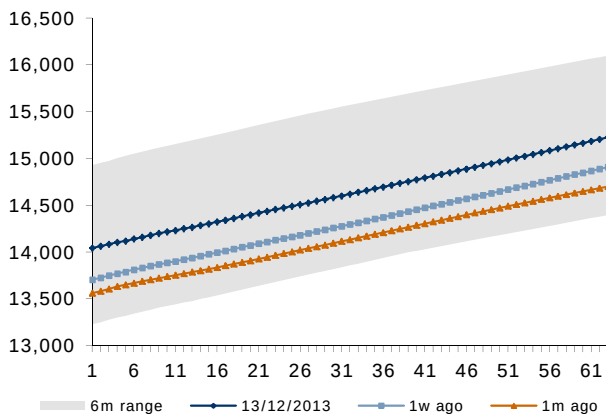
Source: Bloomberg

Chart 32: Copper, LME (USD/t)



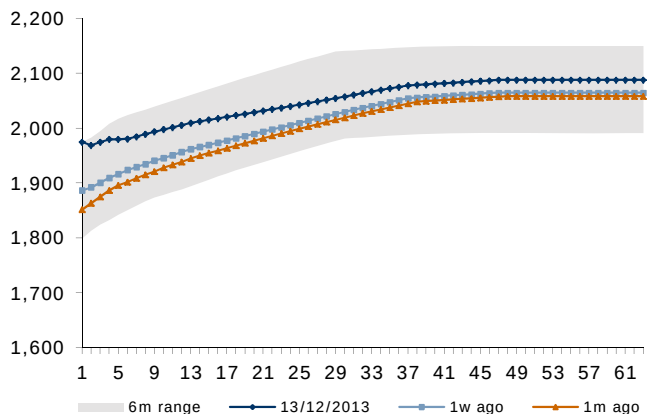
Source: Bloomberg

Chart 33: Nickel, LME (USD/t)



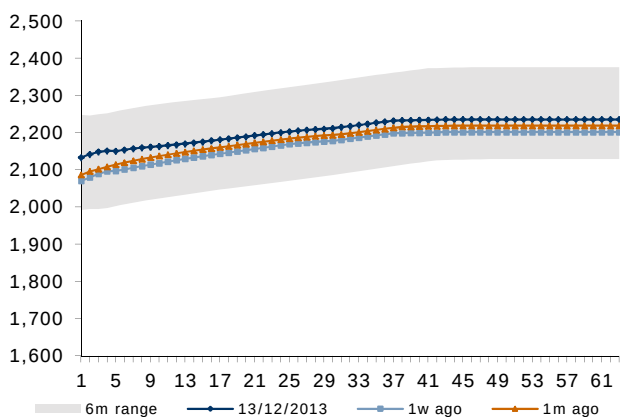
Source: Bloomberg

Chart 34: Zinc, LME (USD/t)



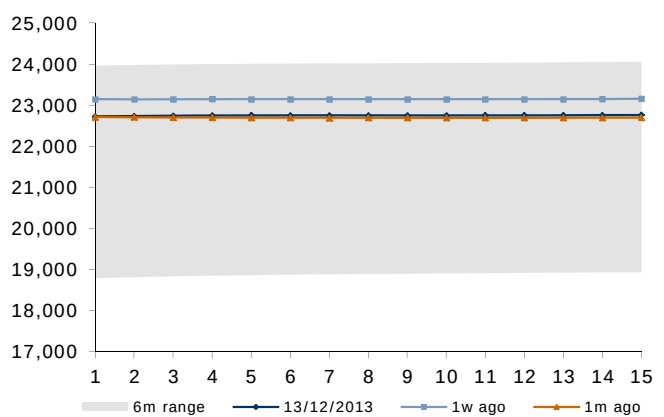
Source: Bloomberg

Chart 35: Lead, LME (USD/t)



Source: Bloomberg

Chart 36: Tin, LME (USD/t)

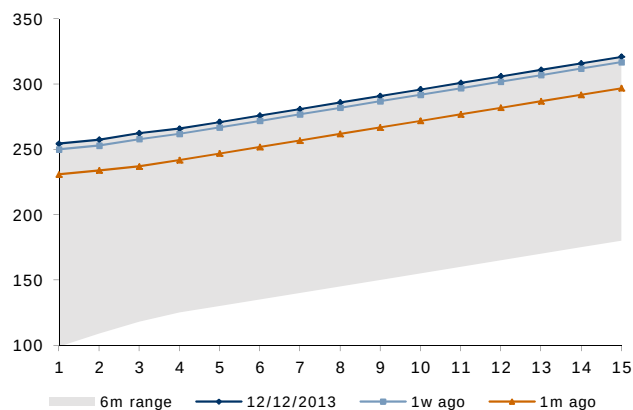


Source: Bloomberg



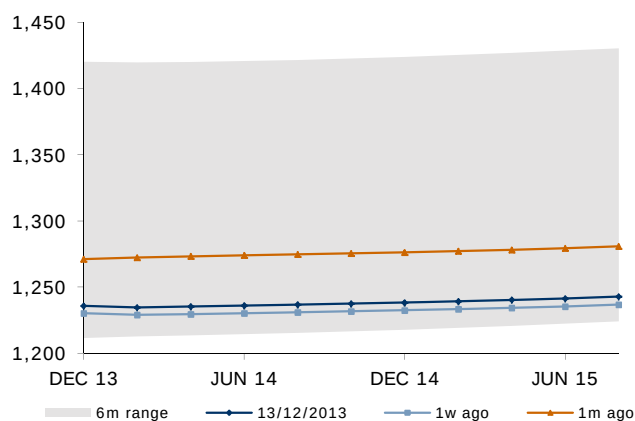
Forward curves, steel billet and precious metals

Chart 37: Steel Billet, LME (USD/t)



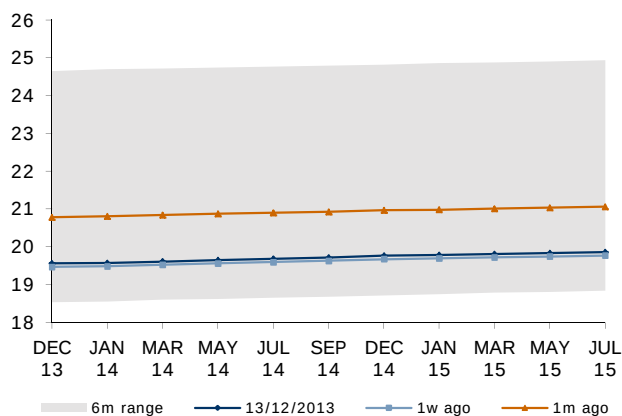
Source: Bloomberg

Chart 38: Gold, COMEX (USD/t oz.)



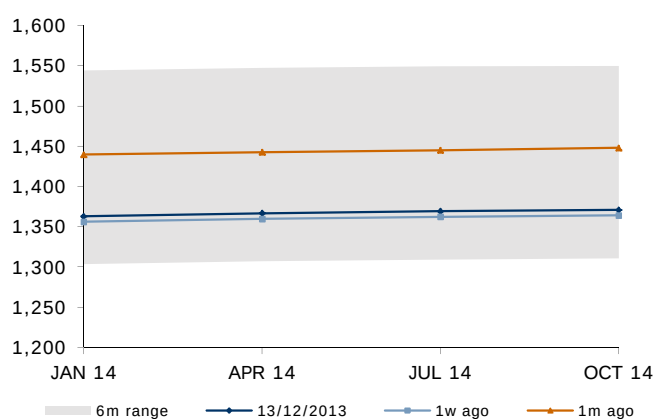
Source: Bloomberg

Chart 39: Silver, COMEX (USD/t oz.)



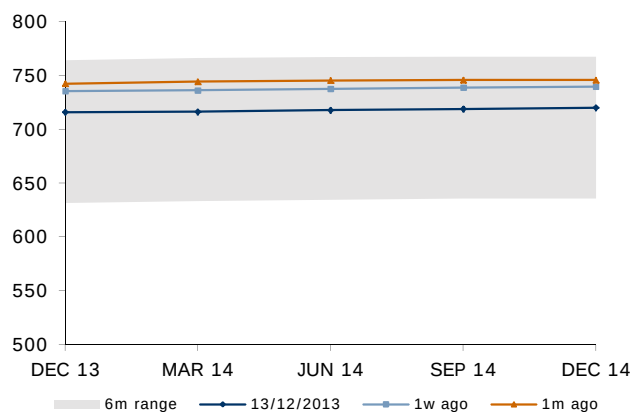
Source: Bloomberg

Chart 40: Platinum NYMEX (USD/t oz.)



Source: Bloomberg

Chart 41: Palladium NYMEX (USD/t oz.)

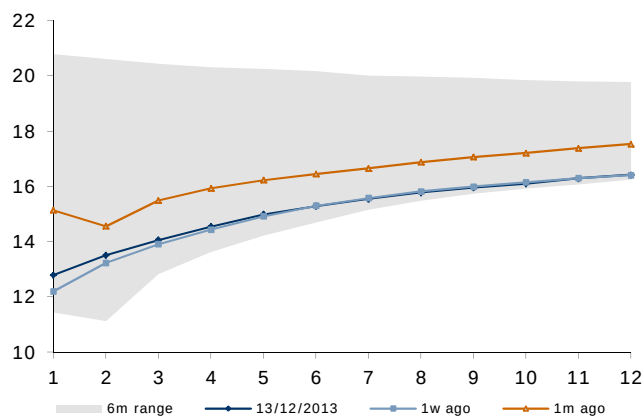


Source: Bloomberg

Markets

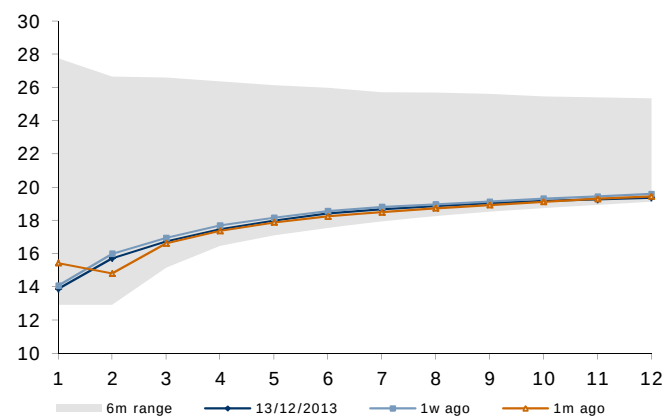
ATM implied volatility term structure

Chart 42: Aluminium implied volatility (percent) and months forward



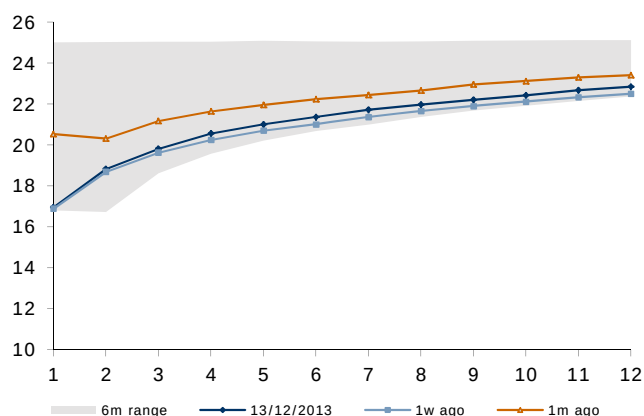
Source: Bloomberg

Chart 43: Copper implied volatility (percent) and months forward



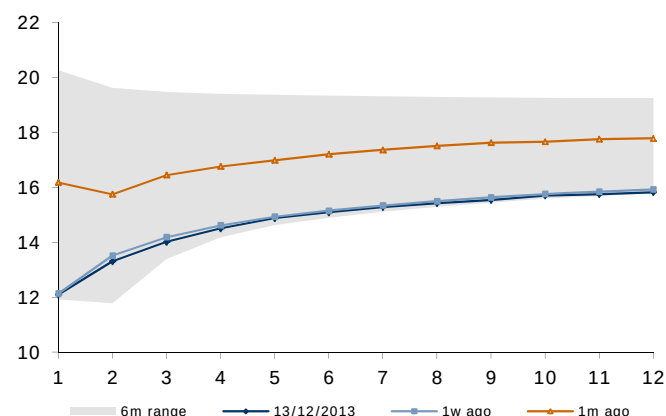
Source: Bloomberg

Chart 44: Nickel implied volatility (percent) and months forward



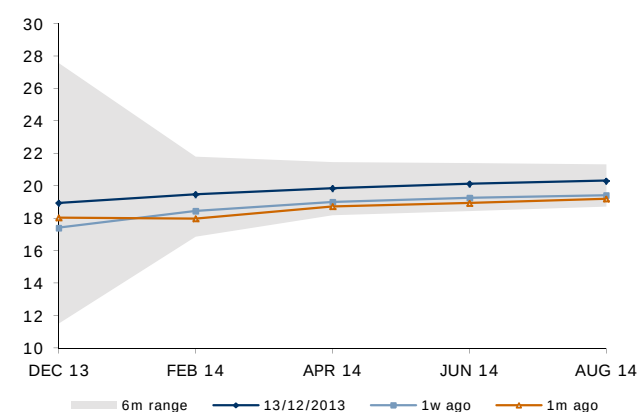
Source: Bloomberg

Chart 45: Zinc implied volatility (percent) and months forward



Source: Bloomberg

Chart 46: Gold implied volatility (percent) and futures delivery month

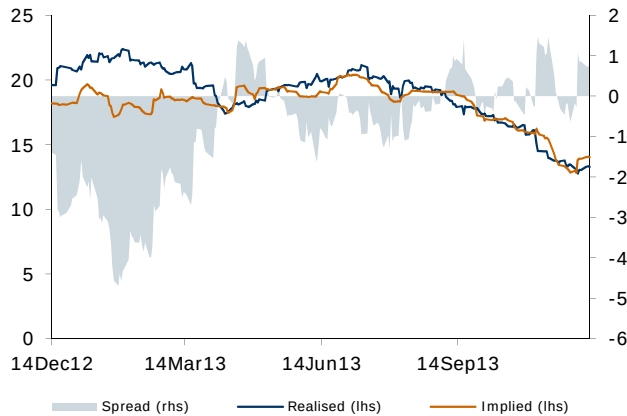


Source: Bloomberg



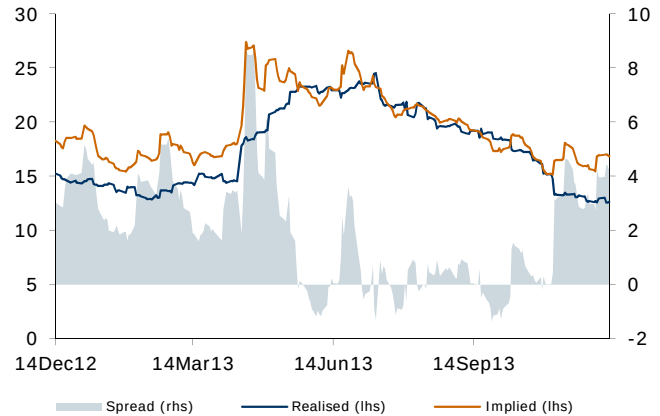
Realised vs implied ATM volatility

Chart 47: Aluminium, LME, 3m implied vs realised vol (percent)



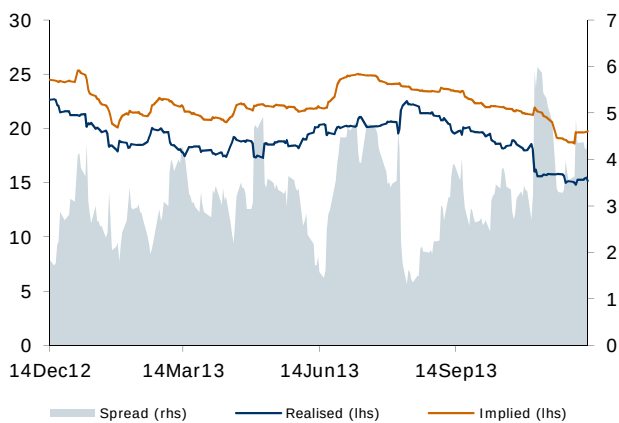
Source: Bloomberg

Chart 48: Copper, LME, 3m implied vs realised vol (percent)



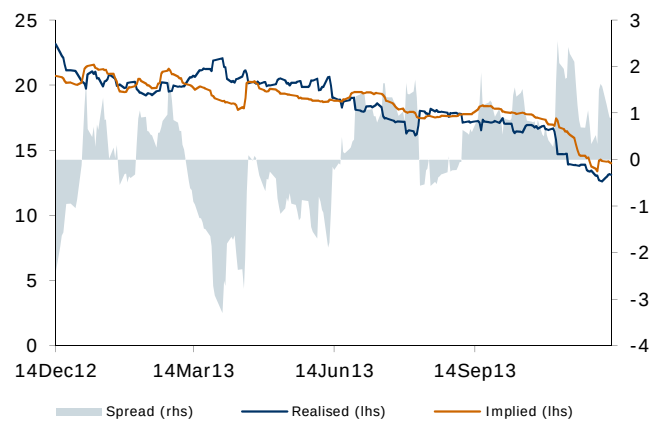
Source: Bloomberg

Chart 49: Nickel, LME, 3m implied vs realised vol (percent)



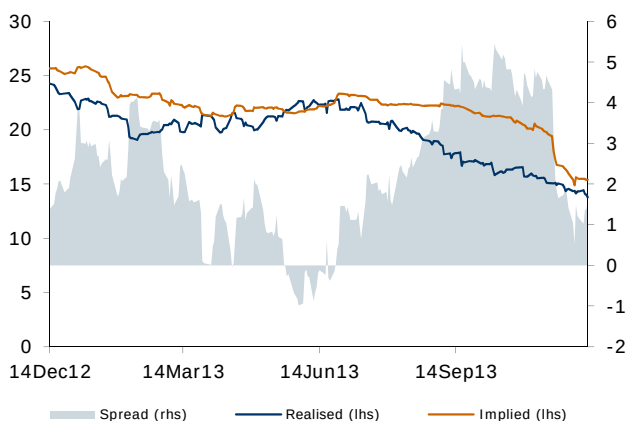
Source: Bloomberg

Chart 50: Zinc, LME, 3m implied vs realised vol (percent)



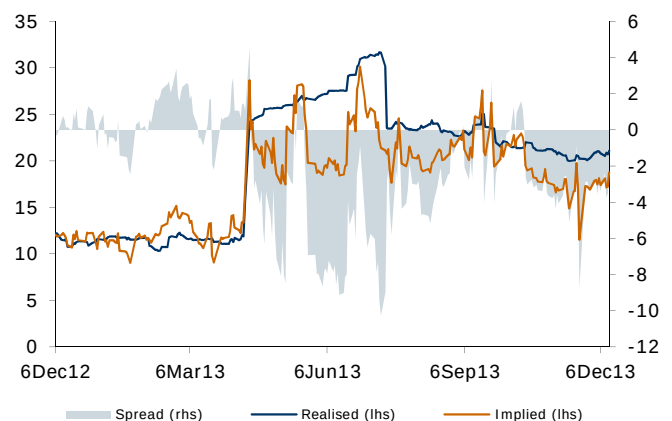
Source: Bloomberg

Chart 51: Lead, LME, 3m implied vs realised vol (percent)



Source: Bloomberg

Chart 52: Gold, Comex, Front contract implied vs realised vol (percent)



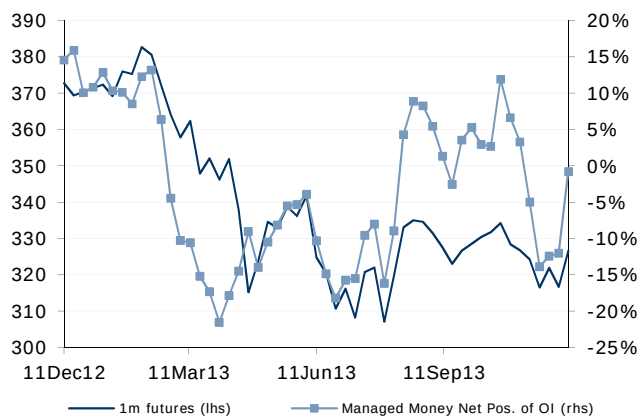
Source: Bloomberg

Markets



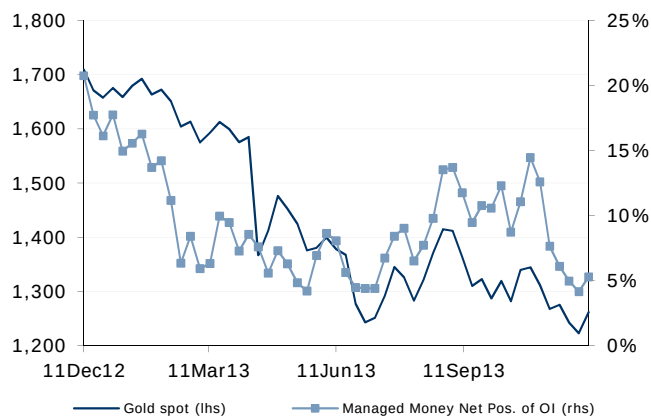
CFTC Commitments of Traders Report

Chart 53: Comex Copper



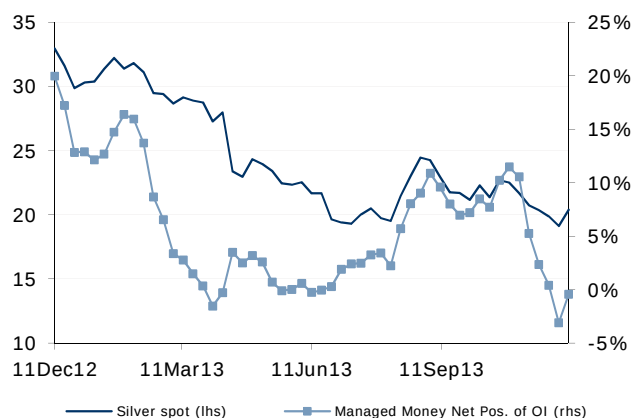
Source: Bloomberg

Chart 54: Comex Gold



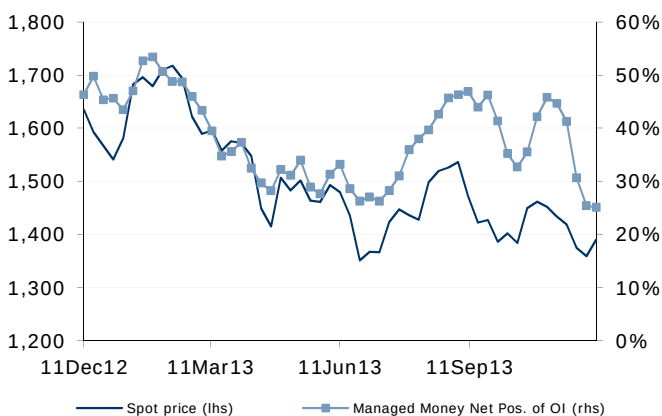
Source: Bloomberg

Chart 55: Comex Silver



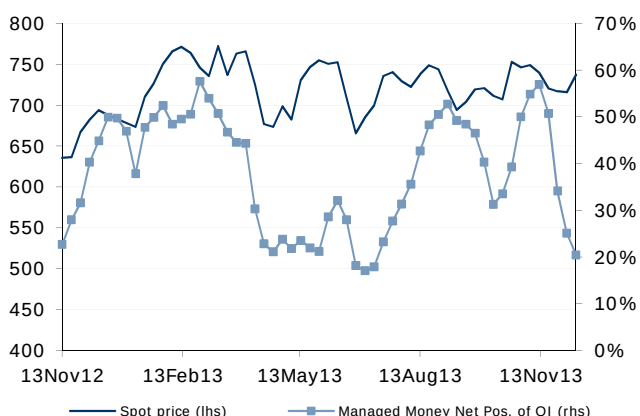
Source: Bloomberg

Chart 56: NYMEX Platinum



Source: Bloomberg

Chart 57: NYMEX Palladium



Source: Bloomberg

Managed Money is a category of traders defined by the Commodity Futures Trading Commission (CFTC) as either a registered commodity trading advisor (CTA), a registered commodity pool operator (CPO) or an unregistered fund (hedge fund). These traders are engaged in managing and conducting organized futures trading on behalf of clients.

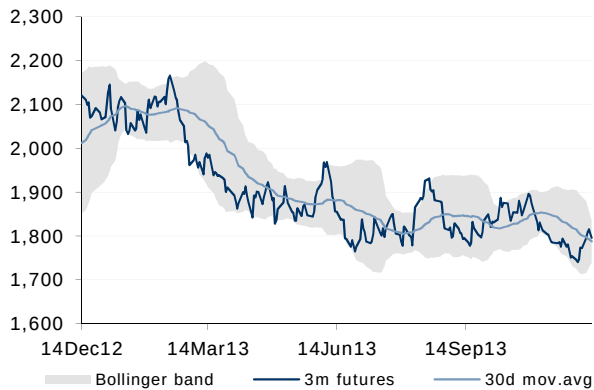
Net positions measures the accumulated positioning for a given point in time for all traders in a CFTC category. **Managed Money** net positions gauges the sentiment for future price direction among the "speculative" or "financial" traders in the futures markets.

Large net positions of Managed Money can be interpreted as a contrarian risk signal: A turn in the sentiment could create a large amount of position squaring from these traders. Net **long** positions would require **selling** and thus downward pressure on prices. Net **short** positions would require **buying** and thus upward pressure on prices.

Markets

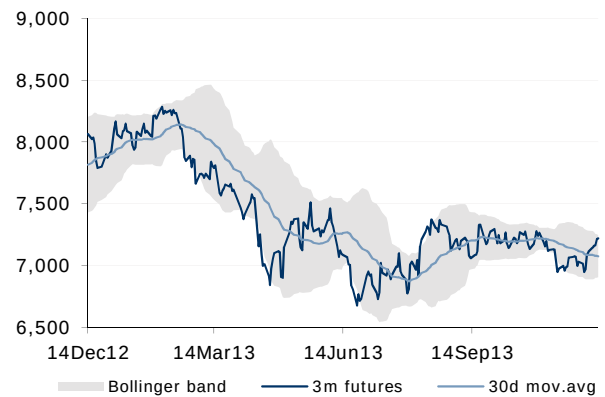
Technical indicators - Bollinger bands

Chart 58: Primary Aluminium (USD/t)



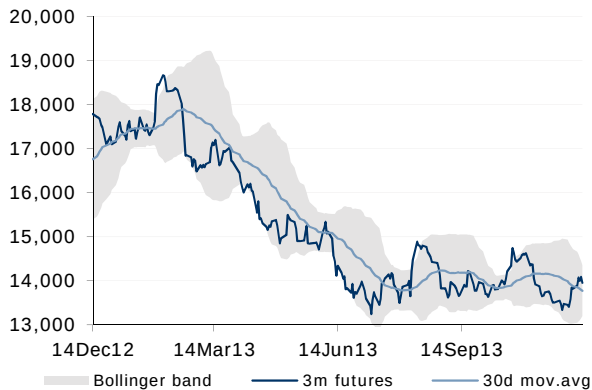
Source: Bloomberg

Chart 59: Copper (USD/t)



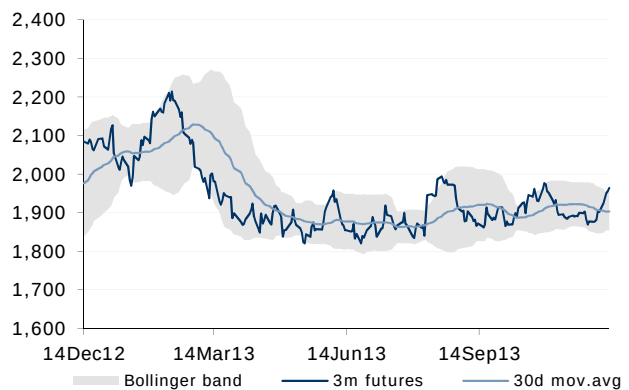
Source: Bloomberg

Chart 60: Nickel (USD/t)



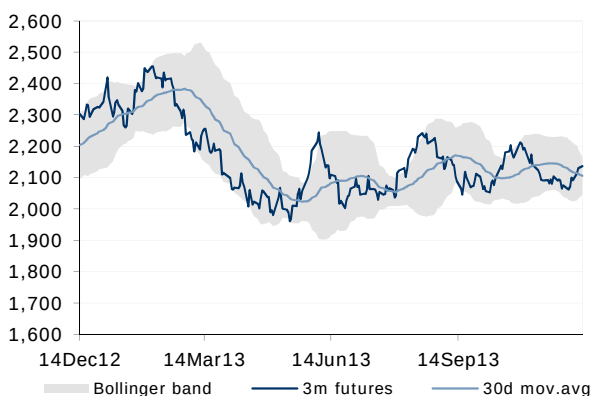
Source: Bloomberg

Chart 61: Zinc (USD/t)



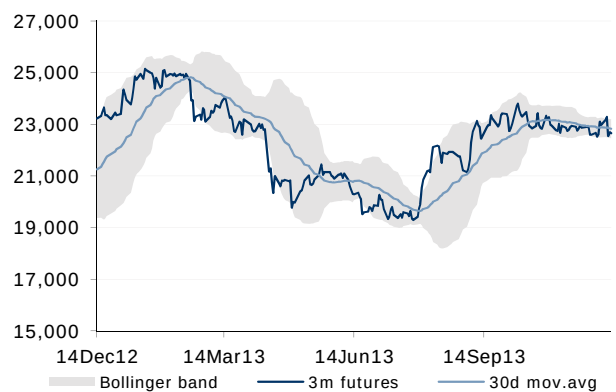
Source: Bloomberg

Chart 62: Lead (USD/t)



Source: Bloomberg

Chart 63: Tin (USD/t)



Source: Bloomberg

Bollinger bands:

Upper/lower band defined as 2 standard deviations above/below the 30-day moving price average. Prices will have resistance at the upper band while they have support at the lower band.

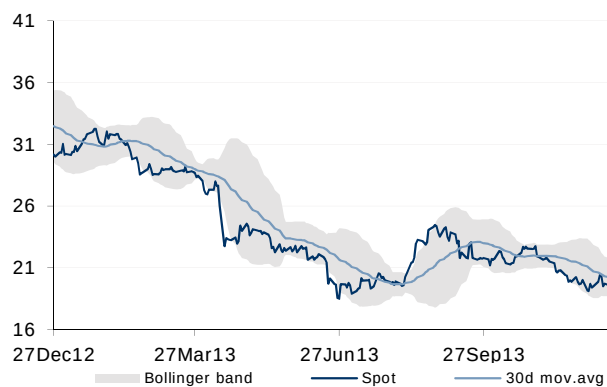
Technical indicators - Bollinger bands (cont.)

Chart 64: Gold spot (USD/t. oz.)



Source: Bloomberg

Chart 65: Silver spot (USD/t. oz.)



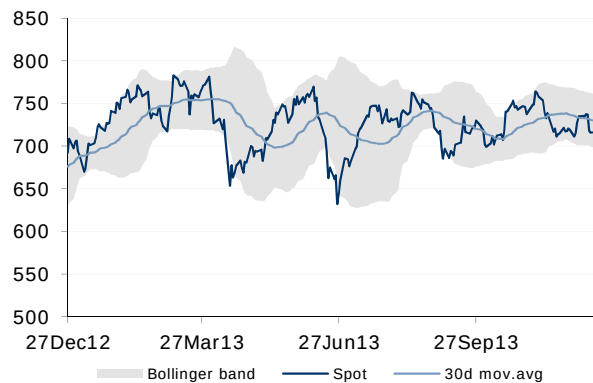
Source: Bloomberg

Chart 66: Platinum spot (USD/t. oz.)



Source: Bloomberg

Chart 67: Palladium spot (USD/t. oz.)



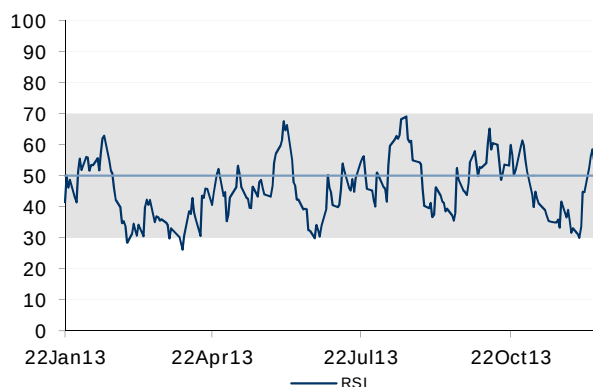
Source: Bloomberg

Bollinger bands:

Upper/lower band defined as 2 standard deviations above/below the 30-day moving price average. Prices will have resistance at the upper band while they have support at the lower band.

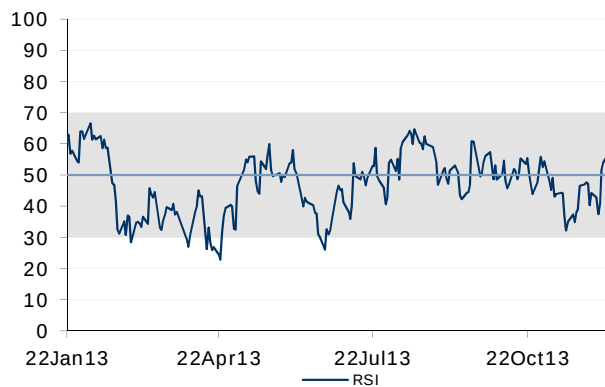
Technical indicators - Relative Strength Index

Chart 68: Primary Aluminium



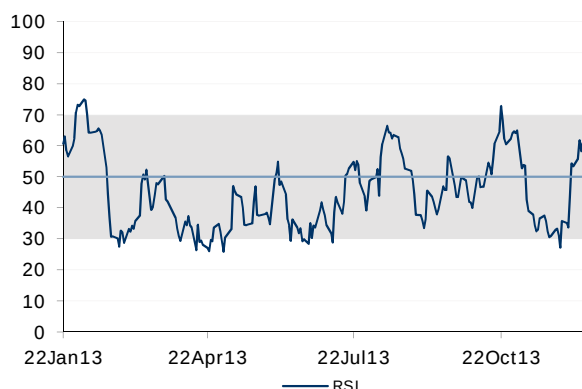
Source: Bloomberg

Chart 69: Copper



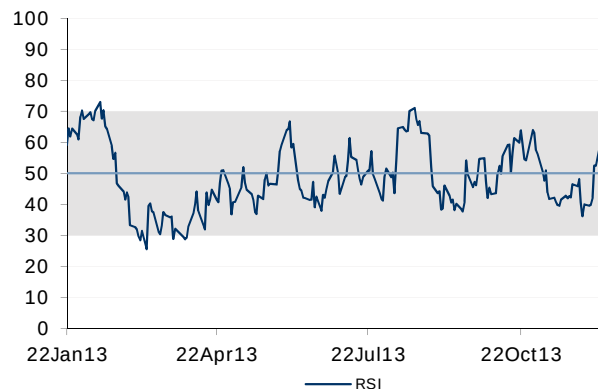
Source: Bloomberg

Chart 70: Nickel



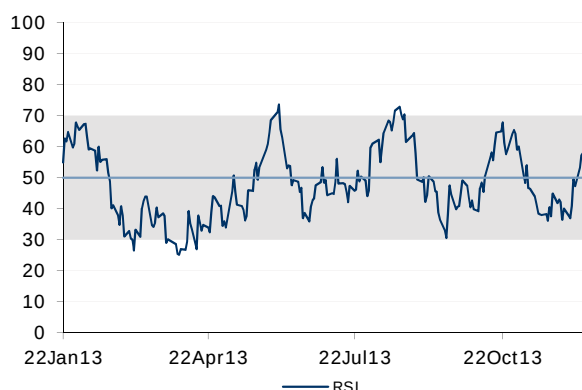
Source: Bloomberg

Chart 71: Zinc



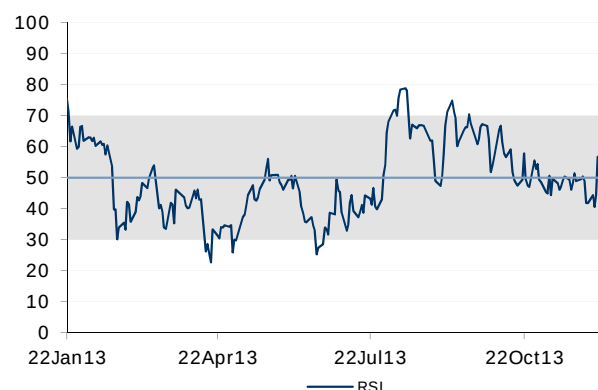
Source: Bloomberg

Chart 72: Lead



Source: Bloomberg

Chart 73: Tin



Source: Bloomberg

Relative Strength Index (RSI):

Measures the momentum in price changes by the relative strength in up moves versus down moves. An RSI of 50 indicates equal strength in up moves versus down moves and indicates no apparent trend. A level above 70 is usually interpreted as an "overbought" market and below 30 as an "oversold" market.

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Relative Strength Index (cont.)

Chart 74: Gold spot



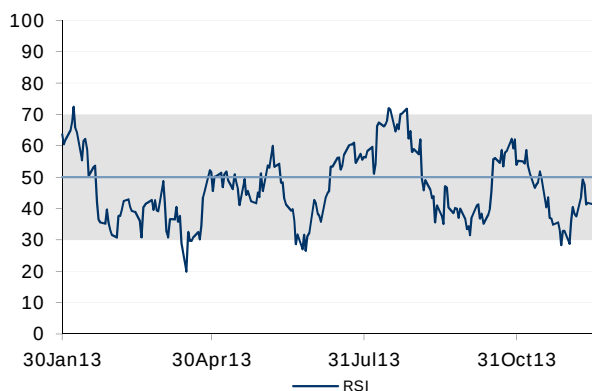
Source: Bloomberg

Chart 75: Silver spot



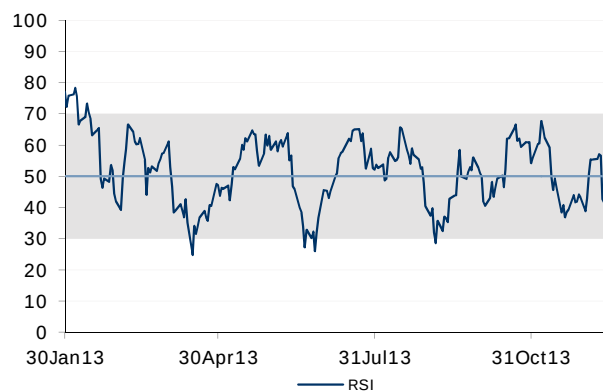
Source: Bloomberg

Chart 76: Platinum spot



Source: Bloomberg

Chart 77: Palladium spot



Source: Bloomberg

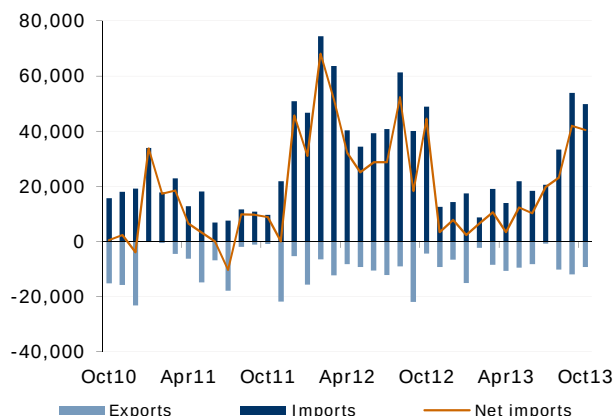
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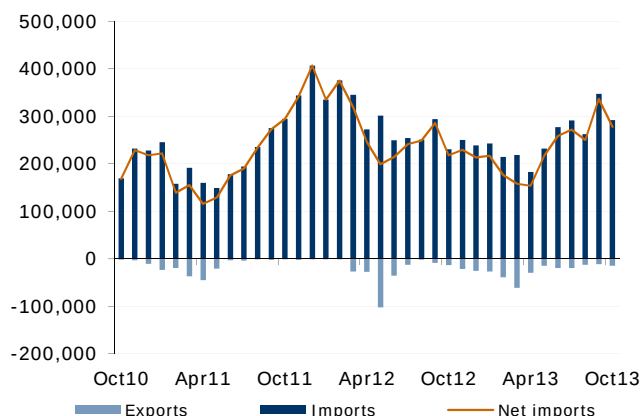
China Metals Trade Statistics

Chart 78: China Primary Aluminium Trade (tonnes)



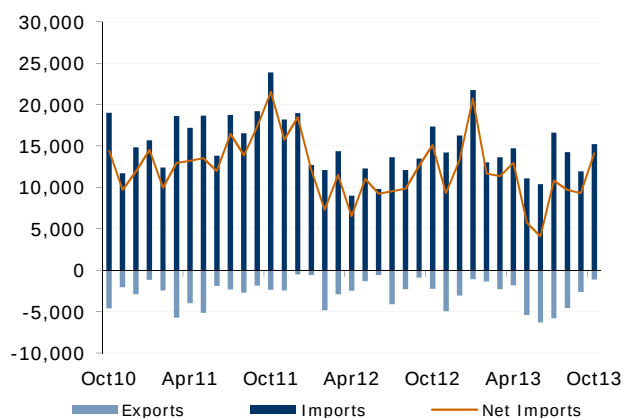
Source: Bloomberg

Chart 79: China Refined Copper Trade (tonnes)



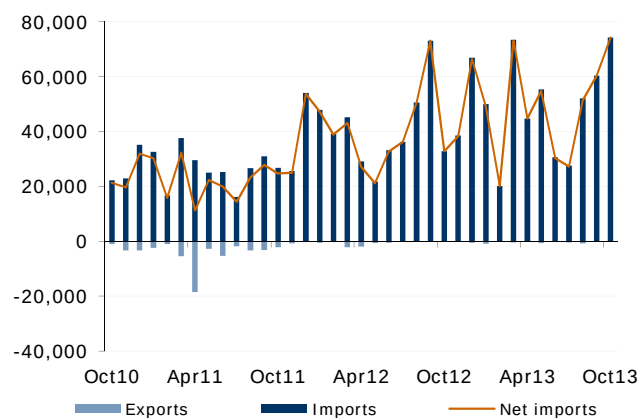
Source: Bloomberg

Chart 80: China Refined Nickel Trade (tonnes)



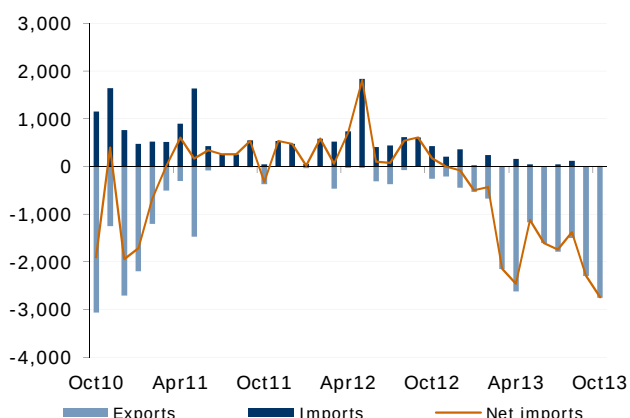
Source: Bloomberg

Chart 81: China Refined Zinc Trade (tonnes)



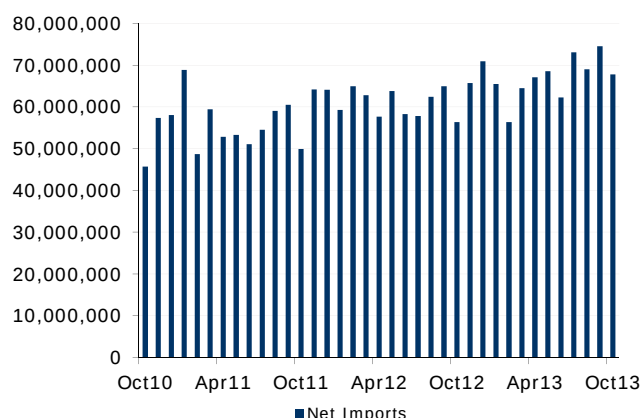
Source: Bloomberg

Chart 82: China Refined Lead Trade (tonnes)



Source: Bloomberg

Chart 83: China Iron Ore Trade (tonnes)

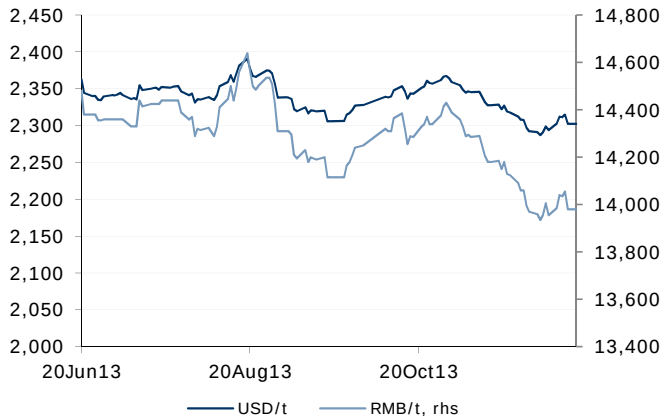


Source: Bloomberg



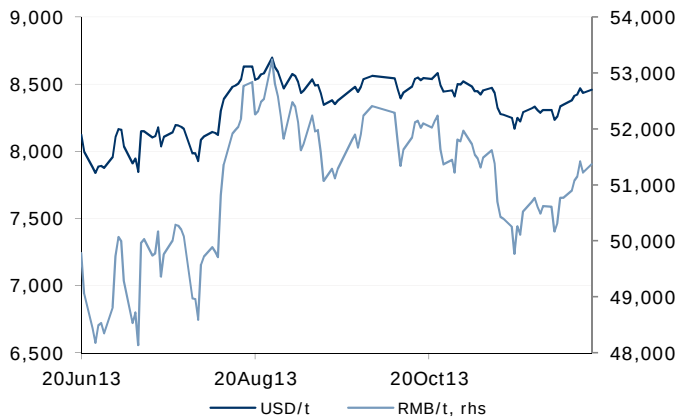
Chinese metals markets price history

Chart 84: Aluminium, SHFE ALUMINUM FUT Apr14



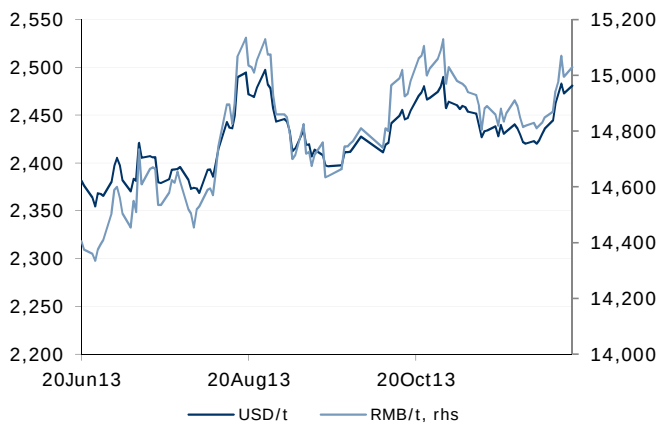
Source: Bloomberg

Chart 85: Copper, SHFE COPPER FUT (SHFE) Feb14



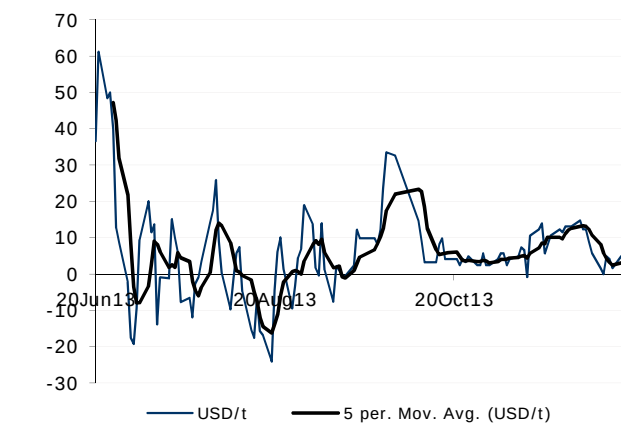
Source: Bloomberg

Chart 86: Zinc, SHFE ZINC FUT (SHFE) Feb14



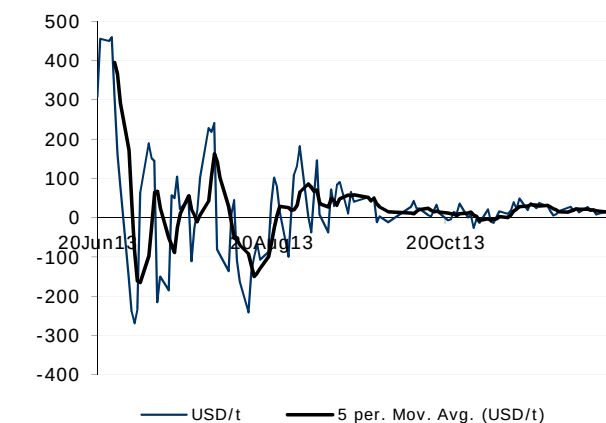
Source: Bloomberg

Chart 87: Aluminium, Chinese spot premium vs. front month futures



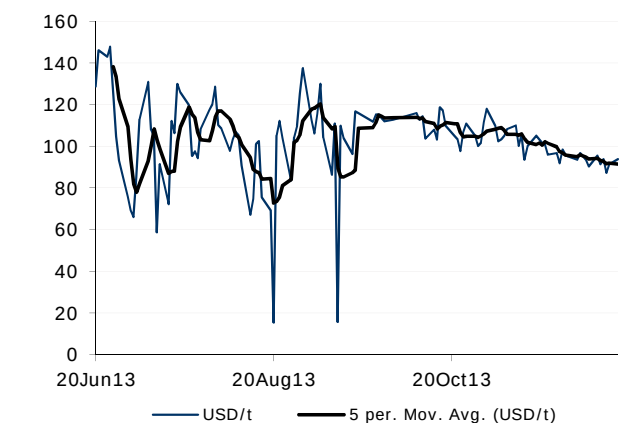
Source: Bloomberg

Chart 88: Copper, Chinese spot premium vs. front month futures



Source: Bloomberg

Chart 89: Zinc, Chinese spot premium vs. front month futures



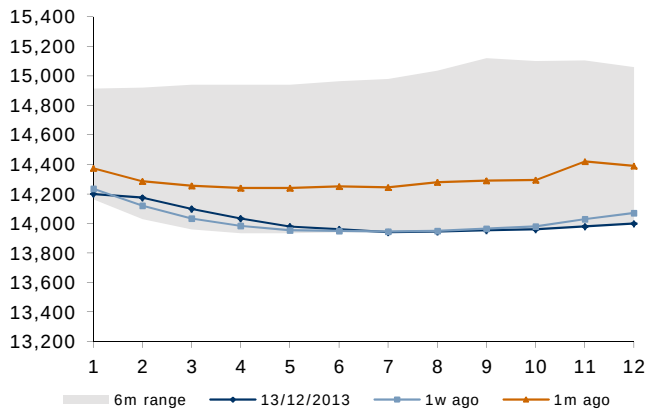
Source: Bloomberg

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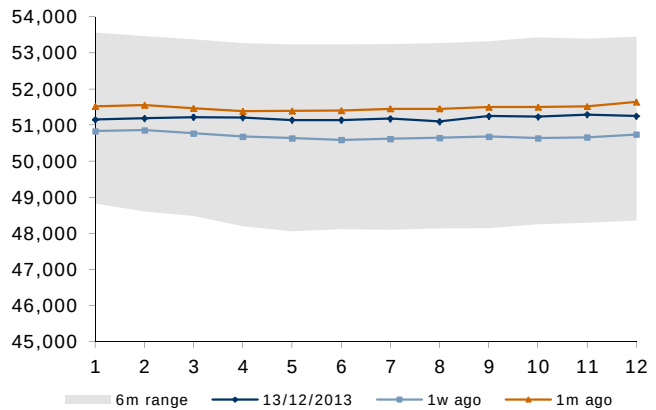
SHFE forward curves, China import arbitrage

Chart 89: Aluminium, SHFE (RMB/t)



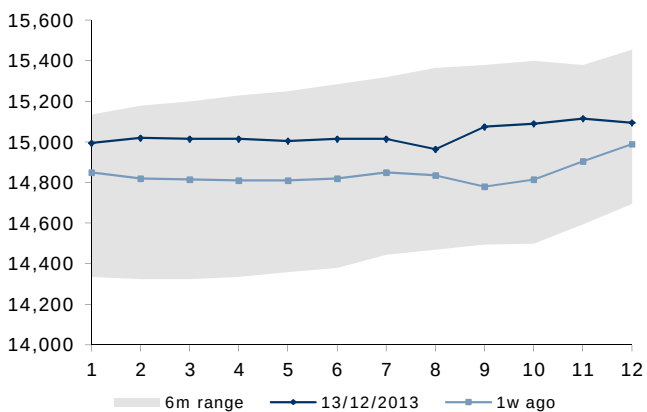
Source: Bloomberg

Chart 90: Copper, SHFE (RMB/t)



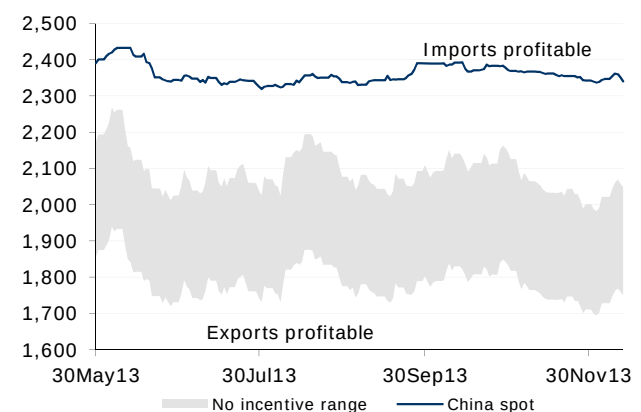
Source: Bloomberg

Chart 90: Zinc, SHFE (RMB/t)



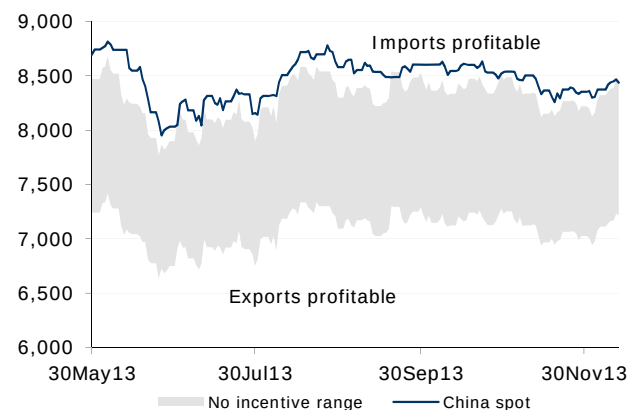
Source: Bloomberg

Chart 91: Aluminium, China import/export arbitrage vs. LME cash (USD/t)



Source: Bloomberg

Chart 92: Copper, China import/export arbitrage vs. LME cash (USD/t)



Source: Bloomberg

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